=> d his

(FILE 'USPAT' ENTERED AT 08:26:33 ON 21 APR 1999)

L1	447	S	435/194/CCLS
L2	5870	S	435/320.1/CCLS
L3	2894	S	435/252.3/CCLS
L4	1606	S	435/325/CCLS
L5	7077	S	L1-L4
L6	3	S	AVIAN SARCOMA LEUKOSIS VIRUS?
L7	4	S	ASLV
L8	4	S	L6 OR L7
L9	5689	S	REVERSE TRANSCRIPTASE?
L10	2	S	L6 AND L9
L11	4	S	L6-L7
L12	0	S	L9(W)L11

=> d his

(FILE 'HOME' ENTERED AT 08:35:02 ON 21 APR 1999)

FILE 'MEDLINE, EMBASE, BIOSIS, BIOTECHDS, SCISEARCH, LIFESCI, HCAPLUS, NTIS, WPIDS' ENTERED AT 08:35:48 ON 21 APR 1999

L1	152	S	ASLV
L2	159	S	AVIAN SARCOMA LEUKOSIS VIRUS
L3	272	S	L1-L2
L4	74035	S	REVERSE TRANSCRIPTASE?
L5	3	S	L3(A)L4
L6	3		DUP REM L5 (0 DUPLICATES REMOVED)
L7	214	S	SUBUNIT(A)COEXPRESS?
L8	1	S	L4 AND L7
L9	0	S	L1 AND L7
L10	0	S	L5 AND L7
L11	32251	S	COEXPRESS?
L12	0	S	L5 AND L11
L13	402	S	L4 AND L11
L14	71	S	L13 AND SUBUNIT?
L15	0	S	ASLV AND L14
L16	0	S	RSV AND L14
L17	0	S	AMV AND L14

L6 ANSWER 1 OF 3 HCAPLUS COPYRIGHT 1999 ACS
ACCESSION NUMBER: 1998:709090 HCAPLUS
DOCUMENT NUMBER: 129:327725
TITLE: **Avian sarcoma-leukosis virus reverse transcriptases** with improved properties for use in reverse transcription, amplification and sequencing
INVENTOR(S): Gerard, Gary F.; Smith, Michael D.; Chatterjee, Deb K.
PATENT ASSIGNEE(S): Life Technologies, Inc., USA
SOURCE: PCT Int. Appl., 201 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 9847912	A1	19981029	WO 98-US8072	19980422
W: AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CU, CZ, DE, DK, EE, ES, FI, GB, GE, GH, GM, GW, HU, ID, IL, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, UA, UG, UZ, VN, YU, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM				
RW: GH, GM, KE, LS, MW, SD, SZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, ML, MR, NE, SN, TD, TG				
AU 9873601	A1	19981113	AU 98-73601	19980422

PRIORITY APPLN. INFO.:
US 97-44589 19970422
US 97-49874 19970617
WO 98-US8072 19980422

AB The title reverse transcriptases comprise a mixt. of two or more proteins with reverse transcriptase activity, one or both having reduced RNase H activity, and each exhibiting a different transcription pause site. These compns. may be used for prodn. of cDNAs as well as for nucleic acid amplication and sequencing. The modified reverse transcriptases may be produced with recombinant cells. Thus, greater yields of total and full-length cDNA product using a 7.5-kb mRNA was obtained when two different RNase H- reverse transcriptases were combined than when each was used sep. in the wild-type or RNase H- form. The two reverse transcriptases used were from Rous sarcoma virus and from Moloney murine leukemia virus. It was also noted that the Rous sarcoma virus RNase H- enzyme was more thermostable than the wild-type enzyme. Other expts. indicated that the combination of RNase H- .alpha. subunit with RNase H+ .beta. subunit was more thermostable than other combinations of RNase H.+-. subunits.

L6 ANSWER 2 OF 3 HCAPLUS COPYRIGHT 1999 ACS
ACCESSION NUMBER: 1994:71986 HCAPLUS

DOCUMENT NUMBER: 120:71986
TITLE: Endonuclease activity associated with reverse transcriptase of avian sarcoma-leukosis viruses
AUTHOR(S): Skalka, Anna Marie
CORPORATE SOURCE: Inst. Cancer Res., Fox Chase Cancer Cent., Philadelphia, PA, 19111, USA
SOURCE: Cold Spring Harbor Monogr. Ser. (1993), 23(Reverse Transcriptase), 193-204
CODEN: CHMSDK; ISSN: 0270-1847
DOCUMENT TYPE: Journal; General Review
LANGUAGE: English
AB A review with 39 refs. on the DNA endonuclease activity assocd. with the integrase domain of **avian sarcoma-leukosis virus reverse transcriptase.**

L6 ANSWER 3 OF 3 HCAPLUS COPYRIGHT 1999 ACS
ACCESSION NUMBER: 1982:139317 HCAPLUS
DOCUMENT NUMBER: 96:139317
TITLE: Reverse transcriptase associated with avian sarcoma-leukosis viruses. I. Comparison of intra-virion content of multiple enzyme forms
AUTHOR(S): Ueno, Akemichi; Ishihama, Akira; Toyoshima, Kumao
CORPORATE SOURCE: Res. Inst. Microbial Dis., Osaka Univ., Suita, 565, Japan
SOURCE: J. Biochem. (Tokyo) (1982), 91(1), 311-22
CODEN: JOBIAO; ISSN: 0021-924X
DOCUMENT TYPE: Journal
LANGUAGE: English
AB The RNA-dependent DNA polymerase (the reverse transcriptase) was solubilized from 3 related strains of avian sarcoma virus (ASV B77, ASV tsLA334, and ASV QV2) as well as avian myeloblastosis virus (AMV) and a chicken endogenous virus (RAV-0), by a combination of nonionic detergent treatment and CsCl step-gradient centrifugation, and was subsequently sepd. into individual enzyme forms by poly(C)-agarose column chromatog. The newly developed 2-step method allowed the 3 mol. forms (.alpha.-, .alpha..beta.-, and .beta.-form) of highly active enzyme to be rapidly and quant. purified from all 5 virus strains examd. The molar ratio of the 3 enzyme forms differed among the virus strains: for the 3 sarcoma viruses, the major species was the .alpha..beta.-form enzyme; the putative holoenzyme and the .alpha.- and .beta.-form enzymes were less than a few percent and 15-25%, resp., whereas the .alpha.-form enzyme content was higher for the 2 leukosis viruses than for the 3 sarcoma viruses. Both the total DNA polymerase activity and the content of the 2 enzyme subunits in purified virions of the 3 sarcoma virus was in the following order: ASV tsLA334 > ASV B77 > ASV QV2, which paralleled the virus yield at a permissive temp. in roller bottle cultures of chick embryo fibroblasts. No alteration was found in the thermolability of DNA polymerases between tsLA334, which carries ts mutations affecting both virus growth and cell transformation, and other viruses.

L8 ANSWER 1 OF 1 HCAPLUS COPYRIGHT 1999 ACS
AN 1999:243984 HCAPLUS
TI Mixed reconstitution of mutated subunits of HIV-1 **reverse transcriptase** coexpressed in Escherichia coli - two tags tie it up
AU Maier, Gottfried; Dietrich, Ursula; Panhans, Barbara; Schroder, Britta; Rubsamen-Waigmann, Helga; Cellai, Luciano; Hermann, Thomas; Heumann, Hermann
CS Max-Planck-Institut fur Biochemie, Martinsried, D-82152, Germany
SO Eur. J. Biochem. (1999), 261(1), 10-18
CODEN: EJBCAI; ISSN: 0014-2956
PB Blackwell Science Ltd.
DT Journal
LA English
CC 7 (Enzymes)
AB The active form of HIV-1 **reverse transcriptase** (RT) is a p66/p51 heterodimer, in which the p51 subunit is generated by C-terminal proteolytic cleavage of p66. A well-known problem of p66 recombinant expression is partial cleavage of a 15-kDa peptide from the C-terminus by host proteases that can not be completely suppressed. In order to analyze the contribution of specific residues to a particular function in one distinct subunit, an expression and purifn. system is required that selects for the combination of the two individual subunits with the desired substitutions. We reconstituted the p66/p51 heterodimer from **subunits coexpressed** in Escherichia coli as an N-terminal fusion protein of glutathione S-transferase (GST) with p51 and a C-terminally His-tagged p66, resp. The two-plasmid coexpression system ensures convenience for gene manipulation while degrdn. is reduced to a min., as dimerization protects the protein from further proteolysis. The combination of glutathione-agarose, phenyl-superose and Ni/nitrilotriacetate affinity chromatog. allows rapid and selective purifn. of the desired subunit combination. Truncated forms of p51 are efficiently removed. Mobility-shift assay revealed that the prepns. are free of p66 homodimer. In a successful test of the novel expression system, mixed reconstituted RTs with p51 selectively mutated in a putative nucleic acid binding motif (the so called helix clamp) show reduced binding of dsDNA in mobility-shift assays. This indicates the p51 subunit has an active role in DNA binding.

=> d 1-2 bib ab

US PAT NO: 5,342,922 [IMAGE AVAILABLE] L10: 1 of 2
DATE ISSUED: Aug. 30, 1994
TITLE: Inhibitors of retroviral protease
INVENTOR: Garland R. Marshall, Clayton, MO
Mihaly V. Toth, Clayton, MO
ASSIGNEE: Washington University, St. Louis, MO (U.S. corp.)
APPL-NO: 07/320,742
DATE FILED: Mar. 8, 1989
ART-UNIT: 181
PRIM-EXMR: Merrell C. Cashion, Jr.
ASST-EXMR: S. G. Marshall
LEGAL-REP: Scott J. Meyer

US PAT NO: 5,342,922 [IMAGE AVAILABLE] L10: 1 of 2

ABSTRACT:
Novel inhibitors of retroviral protease, e.g., HIV protease, are provided which are peptides having from about 4 to about 8 amino acid residues and which are substrates for said protease derived from known cleavage sites and modified to contain an internal CH.sub.2 NH bond isostere.

US PAT NO: 5,086,165 [IMAGE AVAILABLE] L10: 2 of 2
DATE ISSUED: Feb. 4, 1992
TITLE: Inhibitors of retroviral protease with a ketomethylene isosteric replaced amide bond
INVENTOR: Garland R. Marshall, Clayton, MO
Mihaly V. Toth, Kirkwood, MO
ASSIGNEE: Washington University, St. Louis, MO (U.S. corp.)
APPL-NO: 07/652,163
DATE FILED: Feb. 7, 1991
ART-UNIT: 181
PRIM-EXMR: Lester L. Lee
ASST-EXMR: S. G. Marshall
LEGAL-REP: Scott J. Meyer, James W. Williams, Jr.